

REMARKS

This application has been reviewed in light of the Office Action dated October 12, 2000. Claims 1-12 remain under consideration in this application, with Claims 1 and 9 being independent. Claims 1 and 9 have been amended to define still more clearly what Applicant regards as his invention, in terms that distinguish over the art of record. Favorable reconsideration is requested.

The Office Action rejected Claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,047,847 (Toda et al.).

As shown above, Applicant has amended independent Claims 1 and 9 in terms that still more clearly define what Applicant regards as his invention; these changes do not narrow the scope. Applicant submits that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is directed to a camera including a physical element, arranged in a photographing optical system having a light transmission factor and a light transmission amount at least one of which is changeable. The apparatus also includes photoelectric conversion means for receiving an optical image

transmitted through the physical element at a position of an imaging plane, and for converting the optical image into an electrical image signal to be used for photography. The apparatus further includes memory means for storing a plurality of correcting information for correcting a change in a spectrum characteristic of the physical element, caused by a change of at least one the light transmission factor and the light transmission amount of the physical element. The apparatus also includes correction means for reading out from the memory means the correcting information corresponding to at least one of the light transmission factor and the light transmission amount of the physical element, according to the electrical image signal output from the photoelectric conversion means, and for correcting the change in the spectrum characteristic of the physical element in accordance with the correcting information read out from the memory means.

One important feature of Claim 1 is that it includes a camera which can store the relationship between the transmission factors of the material element and the wavelengths, i.e., the transmission factors corresponding to colors is arranged. In the embodiment shown in Fig. 5 for

example, a look-up table 41 is accessed according to an image signal output from a matrix circuit 38.

Toda et al., as understood by Applicant, relates to an endoscope using, in an image forming optical system, a plurality of liquid crystals having different response frequencies of molecule orientation for a driving signal. Apparently, Toda et al. teaches controlling white balance according to an electrical signal which is output from a CCD 413. As shown in Fig. 43, this light signal is a measurement of the light amount entering a CCD 411. Thus, the output of the image pickup sensor 411 is not used for the white balance control. Nothing has been found in Toda et al. that teaches or suggests correction means functioning together with the photoelectric conversion means and the memory means, as recited in Claim 1.

Accordingly, Applicant submits that Claim 1 is patentable over the cited art, and respectfully request withdrawal of the rejection under 35 U.S.C. § 103(a).

Independent Claim 9 is an apparatus claim corresponding to apparatus Claim 1, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. Accordingly, Claim 9 is believed

to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything that, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as applied against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other rejected claims in this application depend from one or the other of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.


This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding,

it is respectfully requested that the Examiner contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



Attorney for Applicant

Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200



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CLAIMS MARKED TO SHOW CHANGES

1. (Eight times amended) A camera comprising:

a physical element, arranged in a photographing optical system having a light transmission factor and a light transmission amount at least one of which is changeable;

photoelectric conversion means for receiving an optical image transmitted through said physical element at a position of an imaging plane, and for converting the optical image into an electrical image signal to be used for photography;

memory means for storing a plurality of correcting information for correcting a change in a spectrum characteristic of said physical element, caused by a change of at least one the light transmission factor and the light transmission amount of said physical element; and

correction means for reading out from said memory means the correcting information corresponding to at least one of the light transmission [fact] factor and the light transmission amount of said physical element, according to the electrical image signal output from said photoelectric conversion means, and for correcting the change in the spectrum characteristic of the

physical element in accordance with the correcting information read out from said memory means.

9. (Eight Times Amended) A camera comprising:

a physical element, arranged in a photographing optical system having a light transmission factor and a light transmission amount at least one of which is changeable non-mechanically;

photoelectric conversion means for receiving an optical image transmitted through said physical element at a position of an imaging plane, for converting the optical image into an electrical image signal to be used for photography, and capable of adjusting at least one of a light accumulation time and a sensitivity;

memory means for storing a plurality of correcting information for correcting a change in a spectrum characteristic of said physical element, caused by a change of at least one the light transmission factor and the light transmission amount of said physical element;

correcting means for reading out from said memory means the correcting information which corresponds to at least one of the light transmission [fact] factor and the light

transmission amount of said physical element, according to the electrical image signal output from said photoelectric conversion means, and for correcting the change in the spectrum characteristic of the physical element in accordance with the correcting information read out from said memory means; and

exposure amount adjustment means for controlling an exposure amount by a combination of adjusting at least one of the light transmission factor and the light transmission amount of said physical element the change of whose characteristics is corrected by said correcting means, and at least one of the light accumulation time and the sensitivity of said photoelectric conversion means.